



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/599,732

05/30/2007

Richard Komurian

P30939

3337

7055 7590 12/26/2008
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER

COLEMAN, KEITH A

ART UNIT

PAPER NUMBER

3747

NOTIFICATION DATE

DELIVERY MODE

12/26/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No. 10/599,732	Applicant(s) KOMURIAN ET AL.	
	Examiner KEITH COLEMAN	Art Unit 3747	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>1/8/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the component" in claim 1. There is insufficient antecedent basis for this limitation in the claim. Applicant has already specified multiple components throughout the body of the claim such as second component, chamber component, and a valve component. The claim is nebulous as to what Applicant intends to "the component" to be. In addition, a first closing component was not introduced. As such, claims 16 and 17 were not examined on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sliger (US Patent No. 4,426,036).

Art Unit: 3747

With regards to claim 1, the patent to Sliger discloses a chamber component (i.e. cavity inside valve 15 and flange member 11, See Figure 1) having an inlet and an outlet for the fluid to be regulated (water passes through strut member 25), and including a member (i.e. thermal power element 22, Col. 3, Lines 15-25) for regulating the flow passing through said chamber (11) in a longitudinal direction thereof, said regulating member comprising a valve component (i.e. 15 is a valve), which is movable in translation in this direction (i.e. 22 opens and closes 15), is intended to close in a controlled manner a passage cross- section between the inlet and the outlet (See Figure 1), and is rigidly fixed to a control shaft (i.e. cylinder member 23) having a longitudinal extension, wherein the chamber component (chamber portion of 11) further comprises at least one opening (flange member 11 contains an opening via brackets 25) , formed in its constituent lateral wall between the inlet and the outlet, and in that said control shaft (23) carries a second closing component (i.e. 16, flange portion of 15) , which is integral in translation with said shaft (23), this second closing component (16) having two surface supports (i.e. 16 and 17) forming flat, parallel, surface guiding surfaces (i.e. guided into gasket 32), which cooperate with two corresponding flat surfaces located on the internal wall of the component (16) , so as to form two flat surface pairs in sliding contact during the translation of the second closing component (16 and 17) into the component (i.e. the spring is housed on the interior of 26), this second closing component being positioned on said shaft and having a shape that is configured to regulate the flow of water passing through the opening as a function of the regulation of the flow in respect of the passage cross-section (See Figures 1 and 2).

With regards to claim 2, the patent to Sliger discloses wherein the variations in passing flow resulting from the displacement of the shaft (23) in the region of the passage cross- section and in the region of the opening develop in the same way (See Figures 1 and 2).

With regards to claim 3, the patent to Sliger discloses wherein the variations in passing flow resulting from the displacement of the shaft (23) in the region of the passage cross- section and in the region of the opening develop in opposing manners (See Figures 1 and 2).

With regards to claim 4, the patent to Sliger discloses wherein the chamber component has a cylindrical general structure (appears to be a cylinder in Figures 1 and 2) and an internal portion that is profiled by longitudinal segments, and in that the two surface supports are connected to each other by a brace (i.e. strut 25 is a brace, See Figure 2) , the distance between the two supports being of such a length that the second closing component (i.e. the flange portion of 15) is guided in translation into the chamber component (chamber portion of 15) , whilst being substantially locked in rotation with a slight clearance in the plane perpendicular to the shaft and about said shaft (See Figures 1 and 2) .

Art Unit: 3747

With regards to claim 5, the patent to Sliger discloses wherein one of the two guiding surfaces of the component is located in the region of, and surrounds, the opening, and in that the guiding surface forms a means for gradually closing the opening and has a cut-out surface part (i.e. the bottom opening of chamber 15, See Figures 1 and 2).

With regards to claim 6, the patent to Sliger discloses wherein the two guiding surfaces have a protruding excess thickness forming a flat, prominent surface that is intended to limit the surface of contact between the guiding surfaces of the second closing component (i.e. the walls are integrated with the flange portion of 15) and the internal wall of the component, so as to limit friction between said guiding surfaces and the internal wall of the component, whilst at the same time superficially guiding the second closing component into the chamber component (i.e. inside chamber of 11, See Figures 1 and 2).

With regards to claim 7, the patent to Sliger discloses wherein the brace (25) is in the form of a tapered blade (appears to be a blade in Figure 1), and in that two other braces (i.e. there are 4 struts 25) connect the two guiding surfaces by substantially matching the internal shape of the chamber component (i.e. interior of 11), so as to limit disruption of the flow passing through the chamber component (See Figure 2).

Art Unit: 3747

With regards to claim 8, the patent to Sliger discloses wherein a fourth brace , encompassing the hub of the shaft of the regulating member , is provided to connect the braces to each other, so as to stiffen the structure of the second closing component (appears to be four blades 25 shown in Figure 2).

With regards to claim 9, the patent to Sliger discloses wherein the regulating member is fixed to the internal wall of the chamber (11) by means of a stress-retrieving stirrup (18), resting on two interior projections providing permanent support surfaces for the stirrup of said regulating member (23) , in that each of the two braces (25) has a recess that is intended to cooperate with corresponding interior projections of the internal wall of the component (See Figure 2), in that the brace (25) connecting the two braces and the stress-retrieving stirrup is disposed, in the assembly position of the second closing component , on the regulating member , and in that the same exposed surface is superimposed on said brace and said stirrup in the direction of flow, so as to limit losses in pressure of the fluid flow passing through the component (i.e. the components are integrated together, See Figures 1 and 2)

With regards to claim 10, the patent to Sliger discloses wherein the section of the brace, in the longitudinal direction, decreases in the direction of flow (i.e. the brace will inherently hinder flow), the cross-section of the brace being substantially triangular (brace 25 appears triangular in Figure 1).

Art Unit: 3747

With regards to claim 11, the patent to Sliger discloses wherein the regulating member comprises a thermo active or heat-responsive means, such as a wax cartridge, immersed in the fluid present in the component and activating the translation of the valve component (cylinder 23 contains wax, See Col. 3, Lines 19-27)

With regards to claim 12, the patent to Sliger discloses wherein the second closing component has, in the region of the guiding surface intended to slide along the flat surface of the internal wall of the component having the lateral opening (See Figures 1 and 2) , at least one support element (16) for at least one corrugated gasket (32) intended to flatten the guiding surface against the internal wall of the component , so as to increase the tightness between the second closing component (15) and the internal wall of the component , in the region of the lateral opening (See Figures 1 and 2).

With regards to claim 13, the patent to Sliger discloses wherein the second closing component (16 and 17) is in the form of a frame forming a ring (i.e. 16 and 17 are cylindrical in shape), the section of which is dimensioned relative to the section of the chamber component, and having two wings forming the guiding surfaces (17 forms the knife portions).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3747

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sliger (US Patent No. 4,426,036) in view of Duprez et al. (US Patent No. 4,562,953)

With regards to claims 14 and 15, the patent to Sliger discloses all the limitations of the claimed subject matter except positively disclosing wherein the chamber component has, in the region of the lateral opening, a pipe or pipette forming an exterior conduit segment that is continuous with the second closing component, thus providing a bypass fitting towards a new circuit loop or branch.

The patent to Duprez et al. discloses wherein the chamber component has, in the region of the lateral opening , a pipe or pipette (98 See Figure 1) forming an exterior conduit segment that is continuous with the second closing component , thus providing a bypass fitting towards a new circuit loop or branch (See Figure 6).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide the thermostat of Sliger with wherein the chamber component has, in the region of the lateral opening , a pipe or pipette forming an exterior conduit segment that is continuous with the second closing component , thus providing a bypass fitting towards a new circuit loop or branch in view of the teaching to Duprez et al., in order to fluid control (Col. 1, Lines 35-45 from Duprez et al.)

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kunze et al. (US Patent No. 6,520,418) shows the current state of the art.

Art Unit: 3747

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEITH COLEMAN whose telephone number is (571)270-3516. The examiner can normally be reached on 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Cronin can be reached on (571)272-4536. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KAC
/K. C./
Examiner, Art Unit 3747

/Stephen K. Cronin/
Supervisory Patent Examiner, Art Unit 3747